



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,386	01/28/2004	Travis Swanson	DB001098-000	3348
57694	7590	08/13/2007		
JONES DAY 500 GRANT STREET SUITE 3100 PITTSBURGH, PA 15219-2502			EXAMINER CHUNG, PHUNG M	
			ART UNIT 2117	PAPER NUMBER
			MAIL DATE 08/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/766,386

Applicant(s)

SWANSON ET AL.

Examiner

Phung My Chung

Art Unit

2117

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3, 7-14 and 16-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3, 7-14 and 16-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. The indicated allowability of claims 8-13 are withdrawn in view of the newly discovered reference(s) to Enstrom (5,530,895). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 8-14 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvestri (6,385,129) in view of Enstrom (5,530,895).

As per claim 23, Silvestri discloses a system comprising:

A memory chip (505);

A bus (511,512) having a plurality of bit lines; and

A processor (502) connected to the memory chip via the bus and a communication therewith through the bus, wherein the processor is configured to perform the following:

Select a first group of bit lines from the bus to carry a first plurality of data patterns;

Select at least one of the remaining bit lines from the bus not within the first group to carry a second plurality of data patterns;

Transmit the first plurality of data patterns on the first group of bit lines a selected one of the plurality of bit lines in the bus, and

Transmit the second plurality of data patterns on the at least one of the remaining bit lines one or more of the plurality of bit lines other than the selected bit line. These function are inherent in the system of Silvestri. (See Fig. 5, col. 5, lines 57-67 to col. 6, lines 1-3). Silvestri does not specifically disclose perform a data write/read operation at one of the plurality of storage locations using the bus after each bit in the first and the second plurality of data patterns is transmitted on respective bit lines in the bus.

However, Enstrom does disclose perform a data write/read operation at one of the plurality of storage locations using the bus after each bit in the first and the second plurality of data patterns is transmitted on respective bit lines in the bus. (Col. 2, lines 18-88 and col. 5, line 62 to col. 6, line 12). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the step of performing a data write/read operation at one of the plurality of storage locations using the bus after each bit in the first and the second plurality of data patterns is

transmitted on respective bit lines in the bus as taught by Enstrom into the invention of Silvestri so that data read out from the memory can be check for errors.

As per claims 8 and 14, these claims are rejected under similar rationale as set forth in claim 23.

As per claims 9-11, Silvestri further discloses a strobe signal received from a delay locked loop DLL; Configuring the delay locked loop to provide a delay to the strobe signal so as to enable latching of the data. (See col. 1, lines 16-25).

As per claims 12, 13 and 3, Silvestri and Enstrom do not disclose changing a operating condition of the memory, wherein the operating condition includes one or more of a supply voltage, a reference voltage and temperature, and repeating the transmitting steps and performing with the changed operating condition present. However, it would have been obvious design choice to a person of ordinary skill in the art, at the time the invention was made, to change an operating condition of the memory, wherein the operating condition includes one or more of a supply voltage, a reference voltage and temperature, and repeating the transmitting steps and performing with the changed operating condition present so that during these operations, DLL can be monitored to observe its behavior due to changes in the power supply caused by the operation or due to changes in operating conditions such as voltage or temperature, or both.

4. Claims 3, 7 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvestri (6,385,129) in view of Enstrom (5,530,895) as applied to claims 8-14 and 23 above, and further in view of Medlock etal (6,567,017).

Claims 17-22, 3 and 7, the teaching of Silvestri and Enstrom have been discussed above. Silvestri does not disclose a first linear feedback shift register (LFSR) configured to generate the first plurality of data patterns; and

A second linear feedback shift register (LFSR) configured to generate the second plurality of data patterns. However, Medlock et al disclose a first linear feedback shift register (LFSR) configured to generate the first plurality of data patterns; and

A second linear feedback shift register (LFSR) configured to generate the second plurality of data patterns. (See col. 38, lines 65-67 to col. 39, lines 1-8). Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the first linear feedback shift register (LFSR) configured to generate the first plurality of data patterns; and the second linear feedback shift register (LFSR) configured to generate the second plurality of data patterns as taught by Medlock et al into the invention of Silvestri and Enstrom so that data patterns can be generated and transmitted independent from each other by the first and second LFSRs.

5. Applicant's arguments with respect to claims 3, 7-14 and 16-23 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phung My Chung whose telephone number is 571-272-3818. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on 571-272-6962. The fax phone

Art Unit: 2117

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Phung M. Chung  
Primary Patent Examiner  
Art Unit 2117